

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE							ATTY DOCKET NO. CAMPBELL=2C		SERIAL NO. NOT YET ASSIGNED			
									APPLICANT: Robert CAMPBELL et al.					
									FILING DATE: December 9, 2001		GROUP:			
U.S. PATENT DOCUMENTS (include at least patentee, patent number, and issue date)														
EXAMINER INITIAL		DOCUMENT NUMBER						DATE	PATENTEE		CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
	AA	5	1	1	6	9	6	4	5/26/92	CAPON et al.		435	69.7	
	AB	5	1	5	5	0	2	7	10/13/92	SLEDZIEWSKI et al.			69.7	
	AC	5	5	6	7	6	1	1	10/22/96	RALPH et al.			69.51	12/12/94
	AD	5	7	0	5	4	7	8	1/6/98	BOIME			8	11/4/94
	AE	5	6	5	0	1	5	0	7/22/97	GILLIES			134.1	7/27/94
	AF	5	4	4	7	8	5	1	9/5/95	BEUTLER et al.			69.7	
FOREIGN PATENT DOCUMENTS (include at least document number, publication date and country)														
		DOCUMENT NUMBER						DATE	COUNTRY		CLASS	SUBCLASS	TRANSLATION	
	AG	WO 95/31544						23NO1993	WIPO				YES	NO
	AH	WO 9319777						14OC1993	PCT					
OTHER DOCUMENTS (include at least document number, publication date and country)														
	AI	AB NARAYAN, Prema et al., "Functional expression of yoked human chorionic gonadotropin in baculovirus-infected insect cells.", MOLECULAR ENDOCRINOLOGY, vol. 9, no. 12, pp. 1719-1726 (1995).												
	AJ	JOHNSON, Gregory A. et al., "Baculovirus-insect cell production of bioactive choriogonadotropin-immunoglobulin G heavy-chain fusion proteins in sheep.", BIOLOGY OF REPRODUCTION, vol. 52, pp. 68-73 (1995)												
	AK	WU, Chengbin et al., "Protein engineering of a novel constitutively active hormone-receptor complex.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 271, no. 49, pp. 31638-31642 (1996).												
	AL	SMITH, Richard et al., "The active form of tumor necrosis factor is a trimer.", JOURNAL OF BIOLOGICAL CHEMISTRY, col 262, no. 15, pp. 6951-6954 (1987).												
	AM	ECK, Michael et al., "The structure of tumor necrosis factor-alpha at 2.6 Å resolution.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 264, no. 29, pp. 17595-17605 (1989).												
	AN	JONES, E.Y. et al., "Structure of tumor necrosis factor.", NATURE, vol. 338, pp. 225-228 (1989).												
	AO	ECK, Michael et al., "The structure of human lymphotoxin (tumor necrosis factor-beta) at 1.9 Å resolution." JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 267, no. 4, pp. 2119-2122 (1992).												
	AP	PIERCE, John et al., "Glycoprotein hormones structure and function.", DEPARTMENT OF BIOLOGICAL CHEMISTRY, Univ. of Cal., (1991).												
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AQ	LAPTHORN, A.J. et al., "Crystal structure of human chorionic gonadotropin.", NATURE, vol. 369, pp. 455-461 (1994).				
AR	WU, Hao et al., "Structure of human chorionic gonadotropin at 2.6-A resolution from MAD analysis of the selenomethionyl protein.", STRUCTURE, vol. 2, no. 6, pp. 545-558 (1994).				
AS	ENGLEMANN, Hartmut et al., "Antibodies to a soluble form of a tumor necrosis factor (TNF) receptor have TNF- like activity.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 265, no. 24, pp. 14497-14504 (1990).				
AT	ADAM, Dieter et al., "Cross-linking of the p55 tumor necrosis factor receptor cytoplasmic domain by a dimeric ligand induces nuclear factor-Kbeta and mediates cell death.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 29, pp. 17482-17487 (1995).				
AU	LOETSCHER, Hansruedi et al., "Recombinant 55-kda tumor necrosis factor (tnf) receptor.", JOURNAL OF BIOLOGICAL CHEMISTRY, col. 266, no. 27, pp. 18324-18329 (1991).				
AV	BANNER, David W. et al., "Crystal structure of the soluble human 55kd tnf receptor-human tnf β complex: implications for tnf receptor activation.", CELL, vol. 73, pp. 431-445 (1993).				
AW	PENNICA, Diane et al., "Biochemical characterization of the extracellular domain of the 75-kilodalton tumor necrosis factor receptor.", BIOCHEMISTRY, vol. 32, pp. 3131-3138 (1993).				
AX	ENGELMANN, Hartmut et al., "Two tumor necrosis factor-binding proteins purified from human urine.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 265, no. 3, pp. 1531-1536 (1990).				
AY	VAN ZEE, Kimberly et al., "Tumor necrosis factor soluble receptors circulate during experimental and clinical inflammation and can protect against excessive tumor necrosis factor α in vitro and in vivo." PROC. NATL. ACAD. SCI., col. 89, pp. 4845-4849 (1992).				
AZ	ADERKA, Dan et al., "Stabilization of the bioactivity of tumor necrosis factor by its soluble receptors.", J. EXP. MED., col. 175, pp. 323-329 (1992).				
BA	MOHLER, Kendall et al., "Soluble tumor necrosis factor (tnf) receptors are effective therapeutic agents in lethal endotoxemia and function simultaneously as both tnf carriers and tnf antagonists.", JOURNAL OF IMMUNOLOGY, vol. 151, no. 3, pp. 1548-1561 (1993).				
BB	BERTINI, Riccardo et al., "Urinary tnf-binding protein (tnf soluble receptor) protects mice against the lethal effect of tnf and endotoxic shock.", EUR. CYTOKINE NETW., vol. 4, no. 1, pp. 39-42 (1993).				
BC	PIGUET, P.F. et al., "Evolution of collagen arthritis in mice is arrested by treatment with anti-tumor necrosis factor (tnf) antibody or a recombinant tnf receptor.", IMMUNOLOGY, vol. 77, pp. 510-514 (1992).				
BD	WILLIAMS, Richard et al., "Successful therapy of collagen-induced arthritis with tnf receptor-IgG fusion protein and combination with anti-CD4.", IMMUNOLOGY, vol. 84, pp. 433-439 (1995).				
BE	CAPON, Daniel et al., "Designing CD\$ immunoadhesions for AIDS therapy." NATURE, vol. 337, pp. 525-531 (1989)				
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	BF	ASHKENAZI, Avi et al., "Protection against endotoxic shock by a tumor necrosis factor receptor immunoadhesion.", PROC. NATL. ACAD. SCI. USA, vol. 88, pp. 10535-10539		
	BG	SUITTERS, Amanda et al., "Differential effect of isotype on efficacy of anti-tumor necrosis factor alpha chimeric antibodies in experimental septic shock.", J. EXP. MED., vol. 179, pp. 849-856 (1994).		
	BH	NOLAN, Orla et al., "Bifunctional antibodies: concept, production and applications.", BIOCHIMICA ET BIOPHYSICA ACTA, vol. 1040, pp. 1-11 (1990).		
	BI	RODRIQUES, Maria L. et al., "Engineering Fab' fragments for efficient F9ab) ₂ formation in escherichia coli and for improved in vivo stability.", JOURNAL OF IMMUNOLOGY, vol. 151, no. 12, pp. 6954-6961 (1993).		
	BJ	CHANG, Hsiu-Ching et al., "A general method for facilitating heterodimeric pairing between two proteins: application to expression of alpha and beta t-cell receptor extracellular segments.", PROC. NATL. ACAD. SCI. USA, vol. 91, pp. 11408-11412 (1994).		
	BK	KIRK, Zining et al., "Solution assembly of a soluble, heteromeric, high affinity interleukin-2 receptor complex.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 27, pp. 16039-16044 (1995).		
	BL	BAZZIONI, F. et al., "Chimeric tumor necrosis factor receptors with constitutive signaling activity.", PROC. NATL. ACAD. SCI. USA, vol. 92, pp. 5376-5380 (1995).		
	BM	BOLDIN, Mark et al., "Self-association of the "Death domains" of the p55 tumor necrosis factor (tnf) receptor and fas/apo1 prompts signaling for tnf and fas/apo1 effects.", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 1, pp. 387-391 (1995).		
	BN	VU, Thien Khai et al., "Molecular cloning of a functional thrombin receptor reveals a novel proteolytic mechanism of receptor activation.", CELL, vol. 64, pp. 1057-1068 (1991).		
	BO	SONG, Ho Yeong et al., "Aggregation of the intracellular domain of the type I tumor necrosis factor receptor defined by the two-hybrid system.", J. OF BIOLOGICAL CHEMISTRY, vol. 269, no. 36, pp. 22492-22495 (1994).		
	BP	RUSSELL, Deborah et al., "Combined inhibition of interleukin-1 and tumor necrosis factor in rodent endotoxemia: improved survival and organ function.", J. INFECTIOUS DISEASES, vol. 171, pp. 1528-38 (1995).		
	BQ	RAO, Ch. et al., "Stability of human chorionic gonadotropin and its alpha subunit in human blood.", AM. J. OBSTET. GYNECOL., vol. 146, no. 1, pp. 65-68 (1983).		
	BR	DAMEWOOD, Marian et al., "Disappearance if exogenously administered human chorionic gonadotropin.", FERTILITY AND STERILITY, vol. 52, no. 3, pp. 398-400 (1989).		
	BS	CHEN, Fang et al., "The carboxy-terminal region of the glycoprotein hormone alpha-subunit: contributions to receptor binding and signaling in human chorionis gonadotropin.", MOLECULAR ENDOCRINOLOGY, vol. 6. (1992).		
	BT	Abstract of BIELINSKA, M. et al., "Site-directed mutagenesis identifies two receptor binding domains in the human chorionic gonadotropin alpha subunit.", MEMBRANE RECEPTORS, no. 1844.		
	BU	FURUHASHI, Madoka et al., "Fusing the carboxy-terminal peptide of the chronic gonadotropin (cg) beta-subunit to the common alpha-subunit: retention of o-linked glycosylation and enhanced in vivo bioactivity of chimeric human cg.", MOLECULAR ENDOCRINOLOGY, 9:(1) pp. 63 (1995).		
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	BV	SUGAHARA, Tadashi et al., "Biosynthesis of a biologically active single peptide chain containing the human common alpha and chorionic gonadotropin beta subunits in tandem.", PROC. NATL. ACAD. SCI. USA, vol. 92, pp. 2041-2045 (1995).		
	BW	URLAUB, Gail et al., "Isolation of chinese hamster cell mutants deficient in dihydrofolate reductase activity.", PROC. NATL. ACAD. SCI. USA, vol. 77, no. 7, pp. 4216-4220 (1980).		
	BX	NOPHAR, Yaron et al., "Soluble forms of tumor necrosis factor receptors (tnf-rs).", THE EMBO JOURNAL, vol. 9, no. 10, pp. 3269-3278 (1990).		
	BY	FIDDES, John et al., "Isolation, cloning and sequence analysis of the cDNA for the alpha-subunit of human chorionic gonadotropin.", NATURE, vol. 281, pp. 351-356 (1979).		
	BZ	FIDDES, John et al., "The cDNA for the beta-subunit of human chorionic gonadotropin suggests evolution of a gene by readthrough into the 3'-untranslated region.", NATURE, vol. 286, (1980).		
	CA	CAMPBELL, Robert et al., "Conversion of human choriogonadotropin into a follitropin by protein engineering." PROC. NATL. ACAD. SCI. USA, vol. 88, pp. 760-764 (1991).		
	CB	COLE, Edward et al., "Recombinant human thyroid stimulating hormone: development of a biotechnology product for detection of metastatic lesions of thyroid cancer.", BIOTECHNOLOGY, vol. 11, pp. 1014-1024 (1993).		
	CC	GLUZMAN, Yakov. "SV40-transformed simian cells support the replication of early SV40 mutants.", CELL, vol. 23, pp. 175-182 (1981).		
	CD	CHU, Gilbert., "Electroporation for the efficient transfection of mammalian cells with DNA.", NUCLEIC ACIDS RESEARCH, vol. 15, no. 3 (1987).		
	CE	YEN, Janie et al., "A rapid in vitro cytotoxicity assay for the detection of tumor necrosis factor on human BT-20 cells.", JOURNAL OF IMMUNOTHERAPY, vol. 10, pp. 174-181 (1991).		
	CF	F. BUSSOLINO et al., Platelet activating factor produced <i>in vitro</i> by Kaposi's sarcoma cells induces and sustains <i>in vivo</i> angiogenesis, <i>J. Clin. Invest.</i> 96:940-952 (1995)		
	CG	M. K. HELLERSTEIN et al., Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology, 11:258-270 (1996)		
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